BULL. BOT. SURV. INDIA
Vol. 12, Nos. 1-4 : pp. 1-5, 1970

# RARE OR LITTLE KNOWN PLANTS FROM SOUTH INDIA

K. SUBRAMANYAM AND A. N. HENRY

*Botanical Survey of India, Calcutta*

## ABSTRACT

Ten rare and imperfectly known species of Angiosperms collected from Agastyamalai Hills and surrounding regions in Tirunelveli District, Tamil Nadu, South India, are reported in this paper. *Apama barberi* Gamble, *Dioscorea wightii* Hk. f. and *Piper barberi* Gamble were rediscovered after a lapse of several years, and detailed/amended descriptions of them are appended. *Eugenia mabaeoides* Wt. forms a new record for India. *Glycosmis macrocarpa* Wt. and *Piper trioicum* Roxb. are re-established. *Paragrewia poilanei* Gagnep. ex Rao (Tiliaceae) is proved to be conspecific with *Leptonychia moacurroides* Bedd. (Sterculiaceae). *Aeschynanthus planiculmis* (Clarke) Gamble is synonymous to *A. perrottetii* A. DC. *Sarcandra grandifolia* (Miq.) Subr. & Henry, comb. nov. and *Tabernaemontana gamblei* Subr. & Henry, nom. nov. are proposed.

During systematic studies on the flora of Agastyamalai Hills and surrounding regions in Tirunelveli District, Tamil Nadu, South India, many rare and imperfectly known plants were collected. Ten species of Angiosperms are reported in this paper. Some of the species were rediscovered after a lapse of several years and detailed/amended descriptions with illustrations are appended to facilitate easy identification. The identity of certain plants have been re-established by way of "Type Method"; also the correct taxonomic status of some taxa are determined in accordance with the International Code of Botanical Nomenclature (1966). These have caused us to make few changes in the names accepted by earlier taxonomists.

**Aeschynanthus perrottetii** A. DC. Prodr. 9: 261. 1845; Clarke in Hk. f. Fl. Brit. India 4: 339, 1884 (incl. vars.); Gamble, Fl. Pres. Madras 2: 692, 1957 (repr. ed.). *A. planiculmis* (Clarke) Gamble, Fl. Pres. Madras 985, 1924. *A. ceylanica* sensu Wt. Icon. t. 1347, 1848, non Gardn. 1846 [GESNERIACEAE].

Epiphytic undershrubs; stems smooth, glabrous, rooting at nodes. Leaves 2.8-8.2 x 1.2-2.6 cm, broadly elliptic, elliptic-lanceate or oblanceate, fleshy, entire, acute, subobtuse or shortly acuminate at apex, narrowed or obtuse at base. Flowers large, scarlet, terminal, solitary or in fascicles. Capsules up to 20 cm long, linear, papery, loculicidally 2-valved.

Both in the field and in herbaria, we could not segregate *Aeschynanthus planiculmis* from *A. perrottetii*. The shape and size of leaves are considerably variable and consequently we are unable to follow the distinctions as laid down by Gamble (*loc. cit.*). Gamble himself retained *A. planiculmis* as a distinct species with some hesitancy as is evident from his remarks: "It is doubtfully distinct". As a result of our studies we have no hesitation in following up Gamble's hint and uniting the two species.

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Agastyamalai, *Henry* 17429; *Barber* 2887, 3041 (MH).

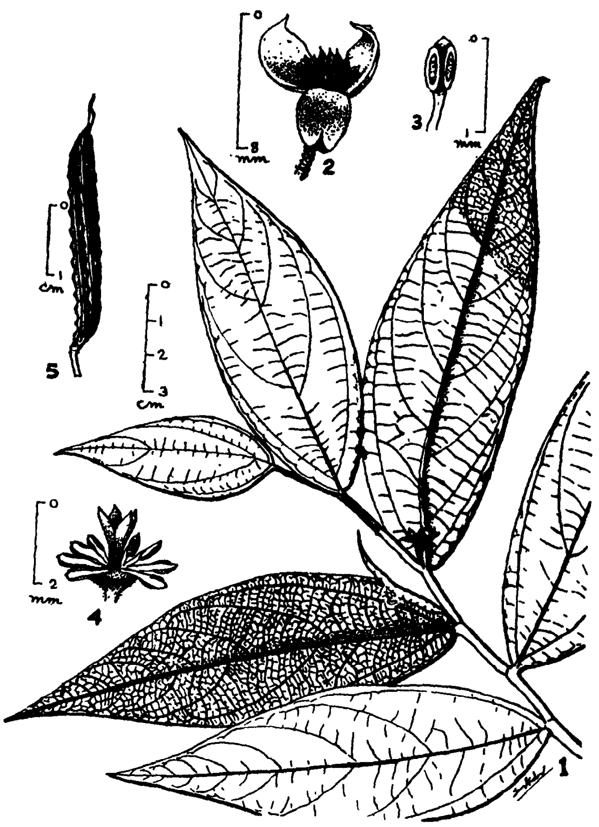
*Distribution*: Peninsular India.

**Apama barberi** Gamble in Kew Bull. 1924: 386, 1924 & Fl. Pres. Madras 2: 840, 1957 (repr. ed.); Schmidt in Engler & Prantl, Nat. Pflanzenfamilien (ed. 2) 16b: 224, 1935 [ARISTOLOCHIACEAE].

Undershrubs, 1-1.5 m tall; branches covered with long corky lenticels. Leaves 5-16 x 3-5 cm, alternate, lanceate, somewhat shining above, minutely pubescent beneath, acuminate at apex, rounded at base; petioles 2-3 mm long. Flowers 7-9 mm across, pinkish, in axillary, somewhat hairy cymes up to 1 cm long. Capsules 2.5-3.5 cm long, moniliform, 4-gonous, glabrous (Text figs. 1-5).

A remarkable species easily distinguishable from *A. siliquosa* Lamk., in having leaves with shorter side ribs and many nerves. Also occurs occasionally in association with *A. siliquosa* Lamk. *A. barberi* Gamble is endemic to Tirunelveli Hills in South India; the type material was collected at Kannikatti by C. A. Barber (2881 & 3093) in May 1901. After a lapse of over six decades, we have succeeded in locating the plant at the type locality.

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Kannikatti, *Henry* 16291, 16974 (MH)



Text Figs. 1-5. *Apama barberi* Gamble : 1. Portion of branch. 2. Flower. 3. Stamen. 4. Flower-perianth removed to show essential organs. 5. Fruit.

*Barber* 2981 & 3093 (Type specimens—MH, CAL & K).

*Distribution*: South India (Tirunelveli Hills).

**Dioscorea wightii** Hk. f. Fl. Brit. India 6: 291, 1892; Kunth in Pfreich. 87: 280, 1924; Prain & Burkill in Journ. Asiat. Soc. Bengal 10: 29, 1914 & in Ann. Roy. Bot. Gard. Calcutta 14(2): 236, pl. 100, 1938; Fischer in Gamble, Fl. Pres. Madras 3: 1056, 1957 (repr. ed.) [DIOSCOREACEAE].

Climbing herbs; stems glabrous, slender, straw-coloured. Leaves up to 9.5 × 5.6 cm, opposite or alternate, ovate, glabrous, acuminate at apex, cordate or truncately cordate at base. Male flowers small, greenish-white, in very slender, simple, glabrous spikes 2-4 together in leaf-axils. Female flowers greenish-white, in solitary, axillary, glabrous, 7-12-flowered spikes.

Hitherto the female plant was not known. Prain & Burkill [Ann. Roy. Bot. Gard. Calcutta 14(2): 237, 1938] state: "This species is imperfectly known. It has been collected once only and then with male flowers. Wight who collected it, left no notes regarding it, and did not preserve the lower parts of the plants. Its rather long spikes, which are axillary, suggest an affinity to *D. spicata*; but the cordate outline of the leaves sharply distinguishes it....." After a lapse of over 100 years we have succeeded in locating this species including the female plants in the Agastyamalai Hills.

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Agastyamalai, *Henry* 17306-Male, 19236-Female (MH).

*Distribution*: South India (Tirunelveli Hills).

**Eugenia mabaeoides** Wt. Illust. 2: 13, 1850; Duthie in Hk. f. Fl. Brit. India 2: 505, 1879; Trimen, Handb. Fl. Ceylon 2: 186, 1894; Alston in Trimen, Handb. Fl. Ceylon 6 (Suppl.): 118, 1931 [MYRTACEAE].

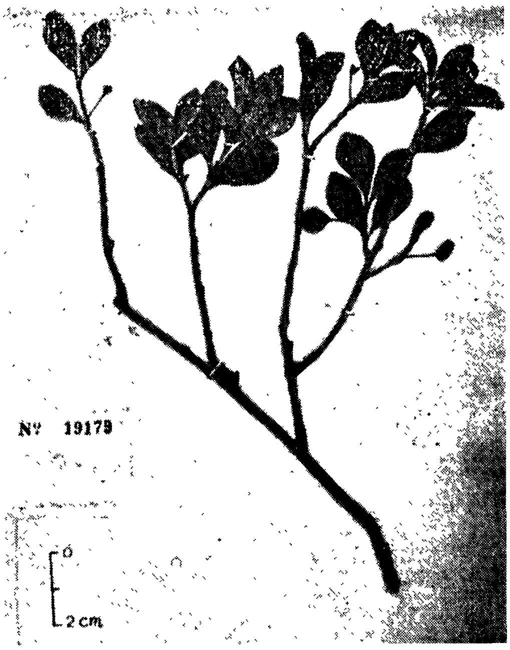


Plate 1 : *Eugenia mabaeoides* Wt.

Much-branched shrubs, 2-3 m tall; branchlets cylindrical, glabrous. Leaves up to 3.4×2.2 cm, obovate-spathulate, rigid, glabrous, shining above, pale beneath, rounded or obtuse at apex, tapering at base, short-petioled. Flowers greenish-white with rosy tinge, small, axillary, solitary or fascicled; pedicels up to 1 cm long, slender. Fruits 5-8 mm across, subglobose or ovoid, crowned with calyx-lobes (Plate 1).

A new record for India; hitherto this species was regarded as endemic to Ceylon. Wight (*loc. cit.*) states: "This can scarcely be mistaken for any other Indian species I have seen, its rigid habit, small hard shining spathulate leaves and fascicled flowers, give it a good deal the appearance of *Maba buxifolia* whence the specific name".

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Agastyamalai peak, *Henry* 16330, 17327, 19179 (MH).

*Distribution*: Ceylon and South India.

**Glycosmis macrocarpa** Wt. Illust. 1: 109, 1840; Narayans. in Rec. bot. Surv. India 14(2): 43, 1941 (excl. descrip.). *G. pentaphylla* var. *macrocarpa* (Wt.) Hk. f. Fl. Brit. India 1: 500, 1875 [RUTACEAE].

Erect shrubs; branchlets nearly glabrous. Leaves 3-5-foliolate; leaflets up to 12×4 cm, oblong or elliptic-lanceate, entire, glabrous, obtusely acuminate at apex, cuneate at base. Flowers small, in mostly terminal, short panicles. Berries 1.2-2.2 cm across, subglobose, constricted at base, smooth. (Plate 2)

The type specimens of *Glycosmis macrocarpa* Wt. (*Wight* 103) were examined by us in K and LE (*vide* Plate 2) and the species re-established. This species which was included in *G. pentaphylla*-complex by some earlier workers is proved to be a distinct species occurring only in the southernmost end of Peninsular India and Ceylon. As stated by Wight (*loc. cit.*) "the large size of the fruit forms the best distinguishing mark: in all the other species it scarcely exceeds the size of a pea, in this it is as large as a moderate sized cherry".

Tanaka identifies this plant (*Wight* 103, K) as *G. citrifolia* (Willd.) Lindl. He adds (Journ. Indian bot. Soc. 16: 228, 1937): "*Glycosmis macrocarpa* Wight, Illus. Ind. Bot. 1: 108, 1840, is in all possibility identical with *G. citrifolia*".

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Kannikatti, *Jacob* 387 (MH); Courtallum, *Wight* 103 (Type specimens—LE, K).

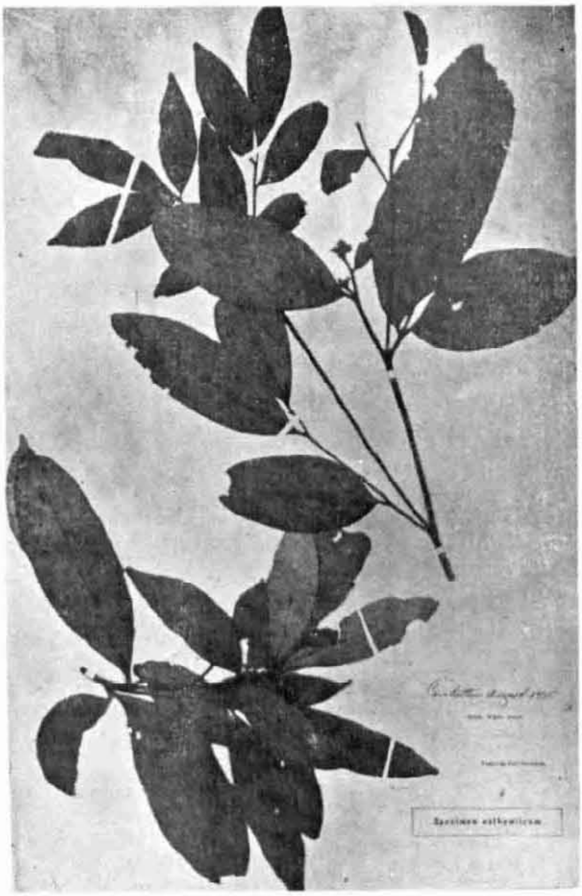


Plate 2: *Glycosmis macrocarpa* Wt. (Type—LE).

*Distribution*: South India and Ceylon.

**Leptonychia moacurroides** Bedd. Fl. Sylv. t. 114, 1871; Mast. in Hk. f. Fl. Brit. India 1: 379, 1874; Gamble, Fl. Pres. Madras 1: 80, 1957 (repr. ed.). *Paragrewia poilanei* Gagnep. ex Rao in Journ. Bombay nat. Hist. Soc. 51: 671, f. 1-9, 1953 [STERCULIACEAE].

Large shrubs or small trees, 5-8 m tall; branches slender, nearly glabrous. Leaves up to 15×4 cm, elliptic-lanceate or oblanceate, membranous, glabrous, entire, acuminate at apex, obtuse or narrowed at base. Flowers greenish-white, axillary, solitary, or in few-flowered, somewhat pubescent cymes shorter than petioles. Capsules 1.5-1.8 cm across, subglobose or obovoid, irregularly 2-valved, verrucose or somewhat tubercled.

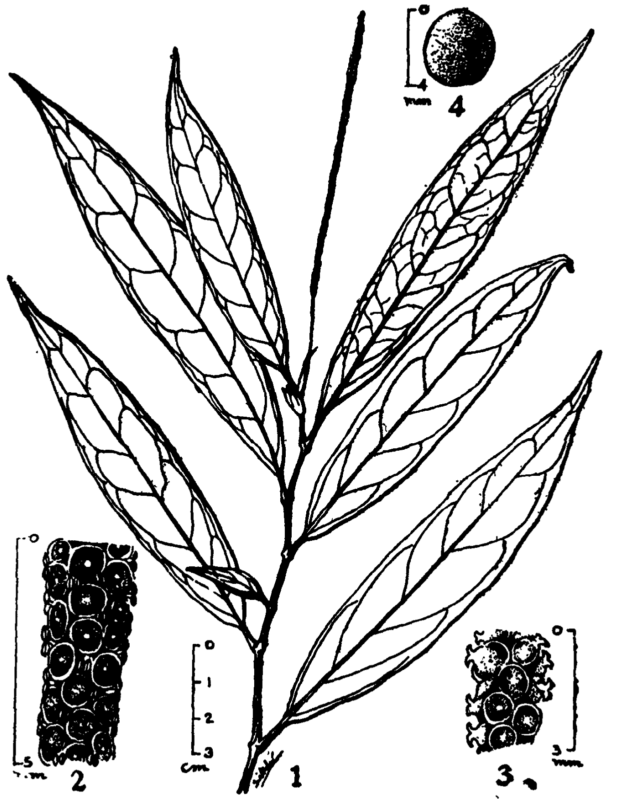
Rao (*loc. cit.*) incorrectly identified this species as *Paragrewia poilanei* (Tiliaceae).

*Specimens examined*: TAMIL NADU: Tirunelveli Dt., Kannikatti, *Henry* 16295, 19867; *Barber* 2901, 3134; *Jacob* 85378, 85714 (MH).

*Distribution*: India, Burma and Annam (?).

**Piper barberi** Gamble in Kew Bull. 1924: 387, 1924 & Fl. Pres. Madras 2: 844, 1957 (repr. ed.) [PIPERACEAE].

Scandent undershrubs; stems and branches somewhat terete, nodose, glabrous; upper internodes sometimes grooved or angled. Leaves 7-14.5 × 0.9-4.5 cm, linear-lanceate, elliptic-lanceate or lanceate, membranous, hyaline and somewhat undulate at margins, dark green and glabrous above, pale and minutely punctate beneath, long acuminate at apex, unequally acute at base, pinnately 5-6-nerved; petioles 0.7-1.5 cm long, glabrous, vaginate near the base; stipules 5-10 mm long, lanceate, caducous. Spikes (male and female) up to 10 cm long, slender, terminal, on filiform peduncles up to 25 cm long; bracts ± 1 mm in diameter, orbicular, hyaline margined, peltate. Male flowers: Stamens 2; filaments 0.5 mm long; anthers 2-locular, dehiscence longitudinal. Female flowers: Ovary 1-locular, obovoid; ovule solitary; style absent; stigmas 3, cylindric, deflexed. Berries ± 4 mm in diameter, obovoid or subcylindric, reddish when ripe (Text figs. 1-4).



Text Figs. 1-4. *Piper barberi* Gamble : 1. Flowering branch. 2. Portion of male spike. 3. Portion of female spike. 4. Fruit.

A remarkable species, which can be easily distinguished by its pinnately veined leaves and slender spikes borne on very long filiform peduncles. Hitherto, the female spikes including fruits of this species were not known. Gamble (Fl. Pres. Madras 2 : 844, 1957, repr. ed.) states: "A very little-known species at once remarkable for the absence of ribs to the leaves which are pinnately nerved instead". This endemic species is known so far only from its type collection; the type material was collected at Kannikatti in May 1901 by C. A. Barber (2991). After a lapse of over six decades, we have succeeded in locating this plant at the type locality. Moreover, we could collect the female spikes including fruits; hence a detailed description is given above.

*Specimens examined* : TAMIL NADU : Tirunelveli Dt., Kannikatti, *Henry* 16269A (male spikes) & *Henry* 16269B (female spikes) MH; *Barber* 433 (MH); *Barber* 2991 (Type specimens—MH, K).

*Distribution*: South India (Tirunelveli Hills).

**Piper trioicum** Roxb. Fl. Ind. 1 : 151, 1820; Miq. Syst. Pip. 310, 1843; Wt. Icon. t. 1935 & 1936, 1853. *P. attenuatum* Buch.-Ham. ex Miq. Syst. Pip. 306, 1843; Hk. f. Fl. Brit. India 5 : 92, 1886; Gamble, Fl. Pres. Madras 2 : 845, 1957 (repr. ed.). *P. sylvestre* sensu Wt. Icon. t. 1937, 1853, non Lamk. 1791, nec Lour. 1790 [PIPERACEAE].

Slender, glabrous climbers with often somewhat zigzag branchlets. Leaves 6-12.5 × 3-6.5 cm, elliptic-lanceate to orbicular-ovate, membranous, abruptly acuminate at apex, rounded or obliquely cordate at base. Spikes up to 15 cm long, slender. Berries ± 3 mm in diameter, globose, sessile.

This species was considered conspecific with *Piper nigrum* Linn. by earlier taxonomists. Wight, who treated *P. trioicum* Roxb. as distinct, states (Icon. 6 : 3, 1853): "The accompanying plates are taken from Roxburgh's drawings and must therefore represent the true plant. Subsequent to Miquel's writing the above characters he had an opportunity of examining specimens from the South of India, and seems now to think that this species is scarcely distinct from *P. nigrum*, but consigns their examination and final determination to the careful consideration of Indian Botanists". Gamble (*loc. cit.*)

segregated *P. trioicum* from *P. nigrum,* but included the former under *P. attenuatum,* and remarks: "This seems to be the Circar species which Roxburgh cultivated at Samulcotta as true pepper". After a careful study of both species in the field and in herbaria, we consider *P. trioicum* distinct from *P. nigrum*; the membranous leaves and smaller berries of the former are diagnostic.

*Specimens examined*: Tamil Nadu: Tirunelveli Dt., Kannikatti, *Henry* 17394, 19257 (MH).

*Distribution*: India, Ceylon and Malay Islands.

**Sarcandra grandifolia** (Miq.) Subr. & Henry, comb. nov. *Chloranthus grandifolius* Miq. Fl. Ind. Bat. 1(1): 802, 1856; Hk. f. Fl. Brit. India 5: 100, 1886 (under undeterminable and excluded species). *Sarcandra irvingbaileyi* Swamy in Proc. nat. Inst. Sci. India B 19: 303, 1953 (syn. nov.). *S. chloranthoides* sensu Wt. Icon. t. 1946, 1853, non Gardn. 1846. *Chloranthus brachystachys* sensu Hk. f. Fl. Brit. India 5: 100, 1886, *p.p.*; Gamble, Fl. Pres. Madras 2: 848, 1957 (repr. ed.), non Bl. 1829 [CHLORANTHACEAE].

Erect, branching undershrubs or shrubs, 1-2 m tall; stems and branches glabrous, articulate at nodes. Leaves 8-19 x 3.5-8.5 cm, opposite, elliptic-ovate or oblanceate, glabrous or nearly so, coarsely spinous-serrate, acuminate at apex, cuneate at base. Flowers greenish, in terminal, glabrous, paniculate spikes. Drupes 3-4 mm across, subglobose, glabrous, purplish-black when ripe.

The floral structure is characteristic: perianth absent, stamen one with the thick fleshy filament inserted on the ovary.

Swamy and Bailey (Journ. Arnold Arb. 21: 127, 1950) re-established the generic name *Sarcandra* Gardn. (1846) for the species of *Chloranthus* having vesselless xylem and simple stamens; they recognised two species: *S. glabra* (Thunb.) Nakai and *S. hainanensis* (P' ei) Swamy & Bailey. Subsequently, Swamy (Proc. nat. Inst. Sci. India B 19: 303, 1953) found that the herbarium specimens of *Sarcandra* collected from South India and Ceylon differed markedly from the known species of *Sarcandra* "in the possession of an unusually large stamen and of a marked cushion-shaped deformation on the abaxial side of the carpel"; these specimens were accommodated in a new species—*S. irvingbaileyi* Swamy. Swamy, in publishing this name, however, overlooked the earlier name *Chloranthus grandifolius* Miq. [Fl. Ind. Bat. 1(1): 802, 1856] for the South Indian and Ceylonese plant. The new combination *Sarcandra grandifolia* (Miq.) Subr. & Henry, is therefore proposed to retain the legitimate specific epithet *"grandifolius"* in the genus *Sarcandra.*

*Specimens examined*: Tamil Nadu: Tirunelveli Dt., Kannikatti, *Henry* 16277; *Barber* 378, 3063 (MH).

*Distribution*: India (Southern mountains of W. Ghats) and Ceylon.

**Tabernaemontana gamblei** Subr. & Henry, nom. nov. *Ervatamia caudata* Gamble in Kew Bull. 1921: 310, 1921 & Fl. Pres. Madras 2: 571, 1957 (repr. ed), non *Tabernaemontana caudata* Merr. 1909 [APOCYNACEAE].

Glabrous shrubs, 1.5-3 m tall. Leaves up to 16 x 5.4 cm, elliptic-obovate or oblanceate, caudate-acuminate at apex, narrowed at base. Flowers white, in terminal corymbose cymes. Follicles up to 4.5 x 1.5 cm, distinct, ovoid-lanceate, curved and long-beaked.

The genus *Ervatamia* Stapf is included in *Tabernaemontana* Linn. (*sensu lato*). Stapf (in Dyer, Fl. Trop. Africa 4: 25, 1902) has split the genus *Tabernaemontana* into several new genera, with the result that the genus *Tabernaemontana* proper has been entirely excluded from the Old World; subsequently most of the Indian species of *Tabernaemontana* were transferred to the new genus *Ervatamia* Stapf. Merrill (Contr. Arnold Arb. 8: 139-144, 1934) expressed doubt about the generic distinction of *Ervatamia;* the calyx lobed to about middle, and the glands within few, do not warrant the separation of *Ervatamia* from *Tabernaemontana.*

*Specimens examined*: Tamil Nadu: Tirunelveli Dt., Kannikatti, *Henry* 16258, 16963; *Barber* 372 (Type); *Collector?* 14677 (MH).

*Distribution*: South India (W. Ghats).